Index to Jan. 1962–Jan. 1963
ASTRONAUTICS
Vols. 7 and 8 No. 1

SUBJECTS

AMERICAN ROCKET SOCIETY
On Quality of Meetings: Finally, Some Facts, Jan. 1962, p. 23.
ARS Conference Treats Solid Rockets, March, p. 26.
1962 ARS Technical Committees, May, p. 42.
Electric Spacecraft—Progress 1962, June, p. 20.
Structures and Materials at Phoenix, June, p. 68.
ARS Members Comment on Merger, July, p. 74; Aug., p. 82; Sept., p. 88; Nov., p. 180.
ARS Forum on Merger at Lunar Missions Meeting, Sept., p. 88.
ARS 17th Annual Meeting, Oct., p. 22.
Lunar Missions Reviewed, Oct., p. 72.
Los Angeles Meeting Plans Set, Nov., p. 156.
First Nuclear-Propulsion Conference Held, Dec., p. 31.
The Last Annual ARS Meeting, Jan. 1963, p. 20.

ASTRODYNAMICS
Planetary Gravispheres, Jan. 1962, p. 26.
Lunar-Orbit Rendezvous and Manned Lunar Landing, April, p. 26.
Saturn C-5 Flight Profile for Rendezvous, April, p. 30.
Missions Normal to the Ecliptic, Sept., p. 59.
State of the Art, 1962, Nov., p. 52.
Mariner 2 Flight to Venus, Dec., p. 66.

BIOASTRONAUTICS
Our View of Space Biology Widens, Jan. 1962, p. 20.
Human Tolerance to Magnetic Fields, March, p. 24.
Spacecrews Underground, March, p. 32.
Protection Against the Solar Flare, Aug., p. 24.
Rotating Manned Space Stations, Sept., p. 14.
AEMT Space-Station Design, Sept., p. 19.
Life Support for Space Stations, Sept., p. 44.
State of the Art, 1962, Nov., p. 104.

COMMUNICATIONS, INSTRUMENTATION
Planning for Space Communications, Jan. 1962, p. 18.
Digital Solar-Aspect Sensors, Jan. 1962, p. 30.
Saturn Telemetry and Tracking, Feb., p. 50.
What Is a Spacecraft Electronic System? May, p. 28.
Integrating Mercury Electronic Subsystems, May, p. 32.
Constraints in Space Telecommunication Systems, May, p. 38.
New Problems of Space Communications, Part 1, June, p. 19; Part 2, July, p. 19; Part III, Aug., p. 26.
TV Broadcasting from Satellites, June, p. 86.
Measuring Lunar Properties from a Soft-Lander, July, p. 30.
Mistram and Rendezvous, July, p. 47.
State of the Art, 1962, Nov., p. 92.

EDITORIALS
An ARS Platform for 1962, Jan. 1962, p. 17.
Congratulations to Project Mercury, March, p. 17.
Consolidation, April, p. 23.
ARS and the Public, May, p. 23.
Consolidation, June, p. 11.
The Question of Merger, July, p. 10.
Space Science and the Engineer, Aug., p. 11.
Consolidation—Your Vote Tells, Sept., p. 10.
Consolidation—Further Progress, Oct., p. 17.
The Time Is Now: Vote! Nov., p. 23.
Consolidation—A New Era, Dec., p. 17.
The End of an Old Era. . .And the Beginning of a New, Jan. 1963, p. 12.

ELECTRIC PROPULSION
Electro-Propulsion with Colloids, Jan. 1962, p. 34.
Plasma Propulsion, Part 1, March, p. 21; Part 2, April, p. 40.
Electro-Propulsion System Applications, March, p. 22.
Electric Spacecraft—Progress 1962, June, p. 20.
Systems Engineering a Nuclear-Electric Spacecraft, June, p. 26.
Feasibility of Arcjet-Propelled Spacecraft, June, p. 36.
Electrostatic Generators for Spacecraft, June, p. 46.
Toward Colloid Propulsion, June, p. 56.
State of the Art, 1962, Nov., p. 60.
Nuclear-Rocket Applications, Dec., p. 22.

GUIDANCE and CONTROL
The Saturn Program, Feb., pp. 22–50.
Saturn Guidance and Control, Feb., p. 44.
Manual Control of the Mercury Spacecraft, March, p. 18.
Thrust-Vector-Control Schemes for Solid-Propellant Rockets, March, p. 28.
What is a Spacecraft Electronic System? May, p. 28.
Systems Approach to Flight Controls, May, p. 36.
Mosaic Guidance for Interplanetary Travel, June, p. 60.
Lunar Takeoff, July, p. 34.
Mistram and Rendezvous, July, p. 47.
Dynamics and Stabilization of the Rotating Space Station, Sept., p. 25.
State of the Art, 1962, Nov., p. 48.

IAF
Shepherd Elected IAF President at Bureau Meeting in Paris, April, p. 74.
International Academy Elects Corresponding Members, Oct., p. 87.
13th IAF Congress in Varna, Nov., p. 162.
Top Soviet Jurists Attend 5th Space Law Colloquium, Nov., p. 167.

INTERPLANETARY PROGRAM
Saturn and the Future, Feb., p. 22.
Systems Engineering a Nuclear-Electric Spacecraft, June, p. 26.
Venus Mission—1962, July, p. 54.
Solar Radiation, Aug., p. 14.
Cosmic Rays and the Interplanetary Medium, Aug., p. 43.
Rotating Manned Space Stations, Sept., p. 14.
To Spin or Not to Spin, Sept., p. 56.
Missions Normal to the Ecliptic, Sept., p. 59.
Managing the Nuclear-Rocket Program, Dec., p. 18.
Nuclear-Rocket Applications, Dec., p. 22.
Mariner 2 Flight to Venus, Dec., p. 66.
Nonrecoverable Boosters, Jan. 1963, p. 26.
Thousand Tons to Orbit, Jan. 1963, p. 44.

LIQUID ROCKETS
Saturn System Develops, Feb., p. 30.
The Saturn S-I Stage, Feb., p. 33.
The Saturn S-IB and -IC Stages, Feb., p. 34.
The Saturn S-II Stage, Feb., p. 35.
The Saturn S-IV Stage, Feb., p. 36.
Centaur Contributions to Saturn, Feb., p. 37.
The Saturn H-1 Engine, Feb., p. 39.
The Saturn F-1 Engine, Feb., p. 40.
The Saturn J-2 Engine, Feb., p. 41.
The Saturn RL10A-3 Engine, Feb., p. 42.
Solid-Hybrid Propulsion, March, p. 30.
Ugly Duckling—VT 1105R Test Vehicle, July, p. 42.
Reusable Launch Systems, Jan. 1963, p. 50.

LUNAR PROGRAM
Ranger Capsule Details Given, Jan. 1962, p. 64.
The Saturn Program, Feb., pp. 22–50.
Apollo and the Saturn Program, Feb., p. 26.
Rendezvous Plans and Problems, April, pp. 24–38.
Lunar-Orbit Rendezvous and Manned Lunar Landing, April, p. 26.
The Polar Lunar Base, July, p. 20.
Measuring Lunar Properties from a Soft-Lander, July, p. 30.
Lunar Takeoff, July, p. 34.
Mistram and Rendezvous, July, p. 47.
Lunar-Surface Rendezvous, Oct., p. 60.
Lunar Missions Reviewed, Oct., p. 72.
Why Lunar-Orbit Rendezvous? Nov., p. 24.
Nuclear-Rocket Applications, Dec., p. 22.
Nonrecoverable Boosters, Jan. 1963, p. 26.
Structures and Materials Impasse? Jan. 1963, p. 36.
Cost-Optimizing Multistage Rockets, Jan. 1963, p. 40.
Thousand Tons to Orbit, Jan. 1963, p. 44.

MAGNETOHYDRODYNAMICS
Plasma Propulsion, Part 1, March, p. 21; Part 2, April, p. 40.
Human Tolerance to Magnetic Fields, March, p. 24.
State of the Art, 1962, Nov., p. 146.

MISSILES and SPACE VEHICLES
Ranger Capsule Details Given, Jan. 1962, p. 64.
The Saturn Program, Feb., pp. 22–50.
Apollo and the Saturn Program, Feb., p. 26.
Centaur Contributions to Saturn, Feb., p. 37.
Manual Control of the Mercury Spacecraft, March, p. 18.
Spacecrews Underground, a Titan Missile Base, March, p. 32.
Rendezvous Plans and Problems, April, pp. 24–38.
The Orbiting Geophysical Observatory—New Tool for Space Research, May, p. 24.
Integrating Mercury Electronic Subsystems, May, p. 32.
The First Hundred Seconds, June, p. 14.
Systems Engineering a Nuclear-Electric Spacecraft, June, p. 26.
Venus Mission—1962, July, p. 54.
Rotating Manned Space Stations, Sept., p. 14.
AEMT Space-Station Design, Sept., p. 19.
To Spin or Not to Spin, Sept., p. 56.
Active Shielding for Manned Spacecraft, Sept., p. 68.
The Military Role in Space, Oct., p. 18.
All-Solid-Propellant Injection Vehicles for Large-Payload Space Missions, Oct., p. 37.
Missiles and Space Systems—1962, Nov., p. 29.
Bioastronautics (Vostoks), Nov., p. 104.
Rift, Dec., p. 38.
Mariner 2 Flight to Venus, Dec., p. 66.
Nonrecoverable Boosters, Jan. 1963, p. 26.
Structures and Materials Impasse? Jan. 1963, p. 36.
Cost-Optimizing Multistage Rockets, Jan. 1963, p. 40.
Thousand Tons to Orbit, Jan. 1963, p. 44.
Reusable Launch Systems, Jan. 1963, p. 50.
Evolving Solid Boosters for Space Missions, Jan. 1963, p. 60.

NUCLEAR PROPULSION
Integrating Isotopic Power Systems, May, p. 30.
Systems Engineering a Nuclear-Electric Spacecraft, June, p. 26.
State of the Art, 1962, Nov., p. 90.
Managing the Nuclear-Rocket Program, Dec., p. 18.
Nuclear-Rocket Applications, Dec., p. 22.
First Nuclear-Propulsion Conference Held, Dec., p. 31.
Nuclear Rocketry—The First Bright Hopes, Dec., p. 32.
Rift, Dec., p. 38.
Nuclear-Engine Design Goals, Dec., p. 54.
Kiwi Developmental Testing, Dec., p. 58.
Safety and Operations with Nuclear Vehicles, Dec., p. 63.

PHYSICS OF ATMOSPHERE and SPACE
Planetary Gravispheres, Jan. 1962, 26.
Human Tolerance to Magnetic Fields, March, p. 24.
The Moon and Its Interior, July, p. 14.
Measuring Lunar Properties from a Soft-Lander, July, p. 30.
Solar Radiation, Aug., p. 14.
Protection Against the Solar Flare, Aug., p. 24.
Magnetic Fields in Space, Aug., p. 34.
Dust and Meteorites, Aug., p. 40.
Cosmic Rays and the Interplanetary Medium, Aug., p. 43.
Announcing the U.S. Standard Atmosphere—1962, Aug., p. 52.
Atmospheric Structure, Aug., p. 54.
Aurora and Airglow, Aug., p. 66.
Liege Colloquium Highlights Planetary Physics, Oct., p. 78.
The Ionosphere, Oct., p. 80.
State of the Art, 1962, Nov., p. 72.

POWER SYSTEMS
What is a Spacecraft Electronic System? May, p. 28.
Integrating Isotopic Power Systems, May, p. 30.
Integrating Mercury Electronic Subsystems, May, p. 32.
Electric Spacecraft—Progress 1962, June, p. 20.
Electrostatic Generators for Spacecraft, June, p. 46.
State of the Art, Nov., p. 110.

PROPELLANTS and COMBUSTION
Self-Pressurizing Propellants, Jan. 1962, p. 28.
The Saturn Program, Feb., pp. 22–50.
Solid-Hybrid Propulsion, March, p. 30.
All-Solid-Propellant Injection Vehicles for Large-Payload Space Missions, Oct., p. 37.
Applicability of Solid Propellants to High-Performance Rocket Vehicles, Oct., p. 50.
State of the Art, 1962, Nov., 97.

Index to Jan. 1962–Jan. 1963
ASTRONAUTICS
Vols. 7 and 8 No. 1

SUBJECTS

AMERICAN ROCKET SOCIETY
On Quality of Meetings: Finally, Some Facts, Jan. 1962, p. 23.
ARS Conference Treats Solid Rockets, March, p. 26.
1962 ARS Technical Committees, May, p. 42.
Electric Spacecraft—Progress 1962, June, p. 20.
Structures and Materials at Phoenix, June, p. 68.
ARS Members Comment on Merger, July, p. 74; Aug., p. 82; Sept., p. 88; Nov., p. 180.
ARS Forum on Merger at Lunar Missions Meeting, Sept., p. 88.
ARS 17th Annual Meeting, Oct., p. 22.
Lunar Missions Reviewed, Oct., p. 72.
Los Angeles Meeting Plans Set, Nov., p. 156.
First Nuclear-Propulsion Conference Held, Dec., p. 31.
The Last Annual ARS Meeting, Jan. 1963, p. 20.

ASTRODYNAMICS
Planetary Gravispheres, Jan. 1962, p. 26.
Lunar-Orbit Rendezvous and Manned Lunar Landing, April, p. 26.
Saturn C-5 Flight Profile for Rendezvous, April, p. 30.
Missions Normal to the Ecliptic, Sept., p. 59.
State of the Art, 1962, Nov., p. 52.
Mariner 2 Flight to Venus, Dec., p. 66.

BIOASTRONAUTICS
Our View of Space Biology Widens, Jan. 1962, p. 20.
Human Tolerance to Magnetic Fields, March, p. 24.
Spacecrews Underground, March, p. 32.
Protection Against the Solar Flare, Aug., p. 24.
Rotating Manned Space Stations, Sept., p. 14.
AEMT Space-Station Design, Sept., p. 19.
Life Support for Space Stations, Sept., p. 44.
State of the Art, 1962, Nov., p. 104.

COMMUNICATIONS, INSTRUMENTATION
Planning for Space Communications, Jan. 1962, p. 18.
Digital Solar-Aspect Sensors, Jan. 1962, p. 30.
Saturn Telemetry and Tracking, Feb., p. 50.
What Is a Spacecraft Electronic System? May, p. 28.
Integrating Mercury Electronic Subsystems, May, p. 32.
Constraints in Space Telecommunication Systems, May, p. 38.
New Problems of Space Communications, Part 1, June, p. 19; Part 2, July, p. 19; Part III, Aug., p. 26.
TV Broadcasting from Satellites, June, p. 86.
Measuring Lunar Properties from a Soft-Lander, July, p. 30.
Mistram and Rendezvous, July, p. 47.
State of the Art, 1962, Nov., p. 92.

EDITORIALS
An ARS Platform for 1962, Jan. 1962, p. 17.
Congratulations to Project Mercury, March, p. 17.
Consolidation, April, p. 23.
ARS and the Public, May, p. 23.
Consolidation, June, p. 11.
The Question of Merger, July, p. 10.
Space Science and the Engineer, Aug., p. 11.
Consolidation—Your Vote Tells, Sept., p. 10.
Consolidation—Further Progress, Oct., p. 17.
The Time Is Now: Vote! Nov., p. 23.
Consolidation—A New Era, Dec., p. 17.
The End of an Old Era. . .And the Beginning of a New, Jan. 1963, p. 12.

ELECTRIC PROPULSION
Electro-Propulsion with Colloids, Jan. 1962, p. 34.
Plasma Propulsion, Part 1, March, p. 21; Part 2, April, p. 40.
Electro-Propulsion System Applications, March, p. 22.
Electric Spacecraft—Progress 1962, June, p. 20.
Systems Engineering a Nuclear-Electric Spacecraft, June, p. 26.
Feasibility of Arcjet-Propelled Spacecraft, June, p. 36.
Electrostatic Generators for Spacecraft, June, p. 46.
Toward Colloid Propulsion, June, p. 56.
State of the Art, 1962, Nov., p. 60.
Nuclear-Rocket Applications, Dec., p. 22.

GUIDANCE and CONTROL
The Saturn Program, Feb., pp. 22–50.
Saturn Guidance and Control, Feb., p. 44.
Manual Control of the Mercury Spacecraft, March, p. 18.
Thrust-Vector-Control Schemes for Solid-Propellant Rockets, March, p. 28.
What is a Spacecraft Electronic System? May, p. 28.
Systems Approach to Flight Controls, May, p. 36.
Mosaic Guidance for Interplanetary Travel, June, p. 60.
Lunar Takeoff, July, p. 34.
Mistram and Rendezvous, July, p. 47.
Dynamics and Stabilization of the Rotating Space Station, Sept., p. 25.
State of the Art, 1962, Nov., p. 48.

IAF
Shepherd Elected IAF President at Bureau Meeting in Paris, April, p. 74.
International Academy Elects Corresponding Members, Oct., p. 87.
13th IAF Congress in Varna, Nov., p. 162.
Top Soviet Jurists Attend 5th Space Law Colloquium, Nov., p. 167.

INTERPLANETARY PROGRAM
Saturn and the Future, Feb., p. 22.
Systems Engineering a Nuclear-Electric Spacecraft, June, p. 26.
Venus Mission—1962, July, p. 54.
Solar Radiation, Aug., p. 14.
Cosmic Rays and the Interplanetary Medium, Aug., p. 43.
Rotating Manned Space Stations, Sept., p. 14.
To Spin or Not to Spin, Sept., p. 56.
Missions Normal to the Ecliptic, Sept., p. 59.
Managing the Nuclear-Rocket Program, Dec., p. 18.
Nuclear-Rocket Applications, Dec., p. 22.
Mariner 2 Flight to Venus, Dec., p. 66.
Nonrecoverable Boosters, Jan. 1963, p. 26.
Thousand Tons to Orbit, Jan. 1963, p. 44.

LIQUID ROCKETS
Saturn System Develops, Feb., p. 30.
The Saturn S-I Stage, Feb., p. 33.
The Saturn S-IB and -IC Stages, Feb., p. 34.
The Saturn S-II Stage, Feb., p. 35.
The Saturn S-IV Stage, Feb., p. 36.
Centaur Contributions to Saturn, Feb., p. 37.
The Saturn H-1 Engine, Feb., p. 39.
The Saturn F-1 Engine, Feb., p. 40.
The Saturn J-2 Engine, Feb., p. 41.
The Saturn RL10A-3 Engine, Feb., p. 42.
Solid-Hybrid Propulsion, March, p. 30.
Ugly Duckling—VT 1105R Test Vehicle, July, p. 42.
Reusable Launch Systems, Jan. 1963, p. 50.

LUNAR PROGRAM
Ranger Capsule Details Given, Jan. 1962, p. 64.
The Saturn Program, Feb., pp. 22–50.
Apollo and the Saturn Program, Feb., p. 26.
Rendezvous Plans and Problems, April, pp. 24–38.
Lunar-Orbit Rendezvous and Manned Lunar Landing, April, p. 26.
The Polar Lunar Base, July, p. 20.
Measuring Lunar Properties from a Soft-Lander, July, p. 30.
Lunar Takeoff, July, p. 34.
Mistram and Rendezvous, July, p. 47.
Lunar-Surface Rendezvous, Oct., p. 60.
Lunar Missions Reviewed, Oct., p. 72.
Why Lunar-Orbit Rendezvous? Nov., p. 24.
Nuclear-Rocket Applications, Dec., p. 22.
Nonrecoverable Boosters, Jan. 1963, p. 26.
Structures and Materials Impasse? Jan. 1963, p. 36.
Cost-Optimizing Multistage Rockets, Jan. 1963, p. 40.
Thousand Tons to Orbit, Jan. 1963, p. 44.

MAGNETOHYDRODYNAMICS
Plasma Propulsion, Part 1, March, p. 21; Part 2, April, p. 40.
Human Tolerance to Magnetic Fields, March, p. 24.
State of the Art, 1962, Nov., p. 146.

MISSILES and SPACE VEHICLES
Ranger Capsule Details Given, Jan. 1962, p. 64.
The Saturn Program, Feb., pp. 22–50.
Apollo and the Saturn Program, Feb., p. 26.
Centaur Contributions to Saturn, Feb., p. 37.
Manual Control of the Mercury Spacecraft, March, p. 18.
Spacecrews Underground, a Titan Missile Base, March, p. 32.
Rendezvous Plans and Problems, April, pp. 24–38.
The Orbiting Geophysical Observatory—New Tool for Space Research, May, p. 24.
Integrating Mercury Electronic Subsystems, May, p. 32.
The First Hundred Seconds, June, p. 14.
Systems Engineering a Nuclear-Electric Spacecraft, June, p. 26.
Venus Mission—1962, July, p. 54.
Rotating Manned Space Stations, Sept., p. 14.
AEMT Space-Station Design, Sept., p. 19.
To Spin or Not to Spin, Sept., p. 56.
Active Shielding for Manned Spacecraft, Sept., p. 68.
The Military Role in Space, Oct., p. 18.
All-Solid-Propellant Injection Vehicles for Large-Payload Space Missions, Oct., p. 37.
Missiles and Space Systems—1962, Nov., p. 29.
Bioastronautics (Vostoks), Nov., p. 104.
Rift, Dec., p. 38.
Mariner 2 Flight to Venus, Dec., p. 66.
Nonrecoverable Boosters, Jan. 1963, p. 26.
Structures and Materials Impasse? Jan. 1963, p. 36.
Cost-Optimizing Multistage Rockets, Jan. 1963, p. 40.
Thousand Tons to Orbit, Jan. 1963, p. 44.
Reusable Launch Systems, Jan. 1963, p. 50.
Evolving Solid Boosters for Space Missions, Jan. 1963, p. 60.

NUCLEAR PROPULSION
Integrating Isotopic Power Systems, May, p. 30.
Systems Engineering a Nuclear-Electric Spacecraft, June, p. 26.
State of the Art, 1962, Nov., p. 90.
Managing the Nuclear-Rocket Program, Dec., p. 18.
Nuclear-Rocket Applications, Dec., p. 22.
First Nuclear-Propulsion Conference Held, Dec., p. 31.
Nuclear Rocketry—The First Bright Hopes, Dec., p. 32.
Rift, Dec., p. 38.
Nuclear-Engine Design Goals, Dec., p. 54.
Kiwi Developmental Testing, Dec., p. 58.
Safety and Operations with Nuclear Vehicles, Dec., p. 63.

PHYSICS OF ATMOSPHERE and SPACE
Planetary Gravispheres, Jan. 1962, 26.
Human Tolerance to Magnetic Fields, March, p. 24.
The Moon and Its Interior, July, p. 14.
Measuring Lunar Properties from a Soft-Lander, July, p. 30.
Solar Radiation, Aug., p. 14.
Protection Against the Solar Flare, Aug., p. 24.
Magnetic Fields in Space, Aug., p. 34.
Dust and Meteorites, Aug., p. 40.
Cosmic Rays and the Interplanetary Medium, Aug., p. 43.
Announcing the U.S. Standard Atmosphere—1962, Aug., p. 52.
Atmospheric Structure, Aug., p. 54.
Aurora and Airglow, Aug., p. 66.
Liege Colloquium Highlights Planetary Physics, Oct., p. 78.
The Ionosphere, Oct., p. 80.
State of the Art, 1962, Nov., p. 72.

POWER SYSTEMS
What is a Spacecraft Electronic System? May, p. 28.
Integrating Isotopic Power Systems, May, p. 30.
Integrating Mercury Electronic Subsystems, May, p. 32.
Electric Spacecraft—Progress 1962, June, p. 20.
Electrostatic Generators for Spacecraft, June, p. 46.
State of the Art, Nov., p. 110.

PROPELLANTS and COMBUSTION
Self-Pressurizing Propellants, Jan. 1962, p. 28.
The Saturn Program, Feb., pp. 22–50.
Solid-Hybrid Propulsion, March, p. 30.
All-Solid-Propellant Injection Vehicles for Large-Payload Space Missions, Oct., p. 37.
Applicability of Solid Propellants to High-Performance Rocket Vehicles, Oct., p. 50.
State of the Art, 1962, Nov., 97.

PROPULSION
Self-Pressurizing Propellants, Jan. 1962, p. 28.
Electro-Propulsion with Colloids, Jan. 1962, p. 34.
The Saturn Program, Feb., pp. 22–50.
Plasma Propulsion, Part 1, March, p. 21; Part 2, April, p. 40.
Thrust-Vector-Control Schemes for Solid-Propellant Rockets, March, p. 28.
Solid-Hybrid Propulsion, March, p. 30.
Electro-Propulsion System Applications, March, p. 22.
Electric Spacecraft—Progress 1962, June, p. 20.
Systems Engineering a Nuclear-Electric Spacecraft, June, p. 26.
Toward Colloid Propulsion, June, p. 56.
Lunar Takeoff, July, p. 34.
Ugly Duckling—VT 1105R Test Vehicle, July, p. 42.
Applicability of Solid Propellants to High-Performance Rocket Vehicles, Oct., p. 50.
First Nuclear-Propulsion Conference Held, Dec., p. 31.
Rift, Dec., p. 38.
Nuclear-Engine Design Goals, Dec., p. 54.
Cost-Optimizing Multistage Rockets, Jan. 1963, p. 40.
Thousand Tons to Orbit, Jan. 1963, p. 44.
Reusable Launch Systems, Jan. 1963, p. 50.
Evolving Solid Boosters for Space Missions, Jan. 1963, p. 60.

RAMJETS
State of the Art, 1962, Nov., p. 138.

RENDEZVOUS
Planetary Gravispheres, Jan. 1962, p. 26.
Approaches to Rendezvous, April, p. 24.
Lunar-Orbit Rendezvous and Manned Lunar Landing, April, p. 26.
Saturn C-5 Flight Profile for Rendezvous, April, p. 30.
Engineering Problems of Orbital Operations, April, p. 36.
Simulating Manual and Automatic Rendezvous, April, p. 38.
AEMT Space-Station Design, Sept., p. 19.
Lunar-Surface Rendezvous, Oct., p. 60.
Why Lunar-Orbit Rendezvous? Nov., p. 24.

SATELLITES
Rendezvous Plans and Problems, April, pp. 24–38.
The Orbiting Geophysical Observatory—New Tool for Space Research, May, p. 24.
TV Broadcasting from Satellites, June, p. 86.
Solar Radiation, Aug., p. 14.
AEMT Space-Station Design, Sept., p. 19.
To Spin or Not to Spin, Sept., p. 56.
The Military Role in Space, Oct., p. 18.

SATURN PROGRAM
Saturn and the Future, Feb., p. 22.
Apollo and the Saturn Program, Feb., p. 26.
Saturn—Background and Management, Feb., p. 29.
Background to Large Launch Vehicles, p. 29.
The Saturn System Develops, p. 30.
Saturn Systems Management, p. 31.
The Saturn Stages, Feb., p. 32.
Introduction, p. 32.
The S-I Stage, p. 33.
The S-IB and -IC Stages, p. 34.
The S-II Stage, p. 35.
The S-IV Stage, p. 36.
Centaur Contributions to Saturn, Feb., p. 37.
The Saturn Engines, Feb., p. 38.
Introduction, p. 38.
The H-1 Engine, p. 39.
The F-1 Engine, p. 40.
The J-2 Engine, p. 41.
The RL10A-3 Engine, p. 42.
Saturn's Quality-Control Program, Feb., p. 43.
Saturn Guidance and Control, Feb., p. 44.
Automatic Checkout for Saturn Stages, Feb., p. 46.
Saturn Developmental Testing, Feb., p. 48.
Saturn Telemetry and Tracking, Feb., p. 50.
Saturn C-5 Flight Profile for Rendezvous, April, p. 30.
Rift, Dec., p. 38.
Structures and Materials Impasse? Jan. 1963, p. 36.
Reusable Launch Systems, Jan. 1963, p. 50.

SOLID-PROPELLANT ROCKETS
ARS Conference Treats Solid Rockets, March, p. 26.
Thrust-Vector-Control Schemes for Solid-Propellant Rockets, March, p. 28.
Solid-Hybrid Propulsion, March, p. 30.
All-Solid-Propellant Injection Vehicles for Large-Payload Space Missions, Oct., p. 37.
Applicability of Solid Propellants to High-Performance Rocket Vehicles, Oct., p. 50.
State of the Art, 1962, Nov., p. 81.
Evolving Solid Boosters for Space Missions, Jan. 1963, p. 60.

SPACE LAW and SOCIOLOGY
International Scene, Aug., p. 74.
International Academy Elects Corresponding Members, Oct., p. 87.
State of the Art, 1962, Nov., p. 115.
Top Soviet Jurists Attend 5th Space Law Colloquium, Nov., p. 167.

STATE OF THE ART, 1962
Why Lunar-Orbit Rendezvous? Nov., p. 24.
Missiles and Space Systems—1962, Nov., p. 29.
System Planning and "State of the Art," Nov., p. 46.
Guidance and Control, Nov., p. 48.
Astrodynamics, Nov., p. 52.
Electric Propulsion, Nov., p. 60.
Physics of the Atmosphere and Space, Nov., p. 72.
Test, Operations, and Support, Nov., p. 76.
Solid-Propellant Rockets, Nov., p. 81.
Nuclear Propulsion, Nov., p. 90.
Communications and Instrumentation, Nov., p. 92.
Propellants and Combustion, Nov., p. 97.
Bioastronautics, Nov., p. 104.
Power Systems, Nov., p. 110.
Space Law and Sociology, Nov., p. 115.
Underwater Propulsion, Nov., p. 126.
Structures and Materials, Nov., p. 132.
Ramjets, Nov., p. 138.
Magnetohydrodynamics, Nov., p. 146.

STRUCTURES and MATERIALS
The Saturn Program, Feb., pp. 22–50.
Thrust-Vector-Control Schemes for Solid-Propellant Rockets, March, p. 28.
Engineering Problems of Orbital Operations, April, p. 36.
The First Hundred Seconds, June, p. 14.
Systems Engineering a Nuclear-Electric Spacecraft, June, p. 26.
Structures and Materials at Phoenix, June, p. 68.
The Polar Lunar Base, July, p. 20.
Lunar Takeoff, July, p. 34.
Protection Against the Solar Flare, Aug., p. 24.
Dust and Meteorites, Aug., p. 40.
AEMT Space-Station Design, Sept., p. 19.
Materials and Structures for Space Stations, Sept., p. 36.
Orbital Station Temperature Control, Sept., p. 40.
Magnetic Forming in Space, Sept., p. 63.
Active Shielding for Manned Spacecraft, Sept., p. 68.
All-Solid-Propellant Injection Vehicles for Large-Payload Space Missions, Oct., p. 37.
State of the Art, 1962, Nov., p. 132.
Rift, Dec., p. 38.
Structures and Materials Impasse? Jan. 1963, p. 36.

TEST, OPERATIONS, and SUPPORT
The Saturn Program, Feb., pp. 22–50.
Saturn's Quality-Control Program, Feb., p. 43.
Automatic Checkout for Saturn Stages, Feb., p. 46.
Saturn Developmental Testing, Feb., p. 48.
Engineering Problems of Orbital Operations, April, p. 36.
Rotating Manned Space Stations, Sept., p. 14.
All-Solid-Propellant Injection Vehicles for Large-Payload Space Missions, Oct., p. 37.
State of the Art, 1962, Nov., p. 76.
Rift, Dec., p. 38.
Kiwi Developmental Testing, Dec., p. 58.
Safety and Operations with Nuclear Vehicles, Dec., p. 63.

UNDERWATER PROPULSION
State of the Art, 1962, Nov., p. 126.
Thousand Tons to Orbit, Jan. 1963, p. 44.

MISCELLANEOUS
Whither Electronics Research? Jan. 1962, p. 32.
What is a Spacecraft Electronic System? May., p. 28.
The First Hundred Seconds, June, p. 14.
The Military Role in Space, Oct., p. 18.
First Annual ARS von Karman Lecture, Jan. 1963, p. 14.

AUTHORS

ADAMS, JAMES J., *See* KURZHALS, PETER R.

ALBUS, JAMES S.
Digital Solar-Aspect Sensors, Jan. 1962, p. 30.

ALDRICH, DAVID E.
Saturn F-1 Engine, Feb., p. 40.

BARNES, F. L., BOLLMAN, W. E., CURKENDALL, D. W., and THORTON JR., T. H.
Mariner 2 Flight to Venus, Dec., p. 66.

BARTLEY, C. E., *See* SUMMERFIELD, M.

BEALE, ROBERT J.
Systems Engineering a Nuclear-Electric Spacecraft, June, p. 26.

BEISCHER, DIETRICH E.
Human Tolerance to Magnetic Fields, March, p. 24.

BELEW, LELAND F.
The Saturn Engines, Introduction, Feb., p. 38,

BERGLUND, RENE A.
AEMT Space-Station Design, Sept., p. 19.

BOLLMAN, W. E., *See* BARNES, F. L.

BOWHILL, SIDNEY A.
The Ionosphere, Oct., p. 80.

BOYER, KEITH
Kiwi Developmental Testing, Dec., p. 58.

BREAKWELL, J. V. and GILLESPIE, R. W.
Missions Normal to the Ecliptic, Sept., p. 59.

BRICKER, LEO
Spacecrews Underground, March, p. 32.

BROWN, O. D. R., *See* GREEN, J.

BUSSARD, ROBERT W.
Nuclear Rocketry—The First Bright Hopes, Dec., p. 32.

BUWALDA, P., *See* DOWNHOWER, W. J.

CANRIGHT, RICHARD B.
Background to Large Launch Vehicles, Feb., p. 29.

CANRIGHT B. AND RAFEL, NORMAN
Nonrecoverable Boosters, Jan. 1963, p. 26.

CARPENTER, CAPT. R. T. and HARVEY, D. G.
Integrating Isotopic Power Systems, May, p. 30.

CHAMBERLAIN, JOSEPH W.
Aurora and Airglow, Aug., p. 66.

CLARK, L. G. and LABAND, K. A.
Orbital Station Temperature Control, Sept., p. 40.

COAR, RICHARD J.
Saturn RL10A-3 Engine, Feb., p. 42.

COENRAADS, C. N., *See* DENHOLM, A. S.

COHEN, WILLIAM
Evolving Solid Boosters for Space Missions, Jan. 1963, p. 60.

COUCH, D. H., HOFFMAN, H. J., NYBERG, D. G., and SLATES, B. J.
Self-Pressurizing Propellants, Jan. 1962, p. 28.

COX, A. LUCILE
Toward Colloid Propulsion, June, p. 56.

CROCKER, ALBERT R.
Communications and Instrumentation, State of the Art, Nov., p. 92.

CUMMINGS, C. I. and LAWRENCE, H. R.
Lunar Missions Reviewed, Oct., p. 72.

CURKENDALL, D. W., *See* BARNES, F. L.

CZARNECKI, EDWIN G.
Structures and Materials, State of the Art, Nov., p. 132.

DANNENBERG, KONRAD K.
The Saturn System Develops, Feb., p. 30.

DECKER, LT. COL. RALPH S.
Safety Operations with Nuclear Vehicles, Dec., p. 63.

DEFRIES, P. J.
Saturn C-5 Flight Profile for Rendezvous, April, p. 30.

DEMETRIADES, STERGE T.
Plasma Propulsion—Part 1, March, p. 21; Part 2, April, p. 40.

DENHOLM, A. S., COENRAADS, C. N., and MCCOY, F. J.
Electrostatic Generators for Spacecraft, June, p. 46.

DERIEUX, EUGENE T.
Solid-Hybrid Propulsion, March, p. 30.

DEWIESS, M. I., *See* YARYMOVYCH, M. I.

DORMAN, B. L. and PEABODY, LT. COL. P. B.
Test, Operations, and Support, State of the Art, Nov., p. 76.

DOWNHOWER, W. J., BUWALDA, P., ECKMAN, P. K., POUNDER, E., RIEDER, R. A., and SOLA, F. L.
Lunar-Surface Rendezvous, Oct., p. 60

DRYDEN, HUGH L.
First Annual ARS von Karman Lecture, Jan. 1963, p. 14.

DUGGER, GORDON, L.
Ramjets, State of the Art, Nov., p. 138.

ECKMAN, P. K. *See* DOWNHOWER, W. J.

EHRICKE, KRAFFT A.
Centaur Contributions to Saturn, Feb., p. 37.

EIMER, MANFRED
Measuring Lunar Properties from a Soft-Lander, July, p. 30.

FARBER, MILTON, *See* SINGER, STANLEY

FELLOWS, COL. W. SCOTT
Rift, Dec., p. 38.
FIELD, ELMER
Saturn S-II Stage, Feb., p. 35.
FINGER, HAROLD B.
Managing the Nuclear-Rocket Program, Dec., p. 18.
FINGER, HAROLD B., *See* ROM, FRANK E.
FINN JR., J. C., *See* GREEN, J.
FRIEDMAN, HERBERT
Solar Radiation, Aug., p. 14.
GEISSLER, E. D. and HAEUSSERMANN, W.
Saturn Guidance and Control, Feb., p. 44.
GILLESPIE, R. W., *See* BREAKWELL, J. V.
GILRUTH, ROBERT R.
Apollo and the Saturn Program, Feb., p. 26.
GOLD, THOMAS
Cosmic Rays and the Interplanetary Medium, Aug., p. 43.
GOLOMB, SOLOMON W.
Whither Electronics Research? Jan. 1962, p 32.
New Problems of Space Communications, Part 1, June, p. 19; July, p. 19; Aug., p. 26.
GRAU, DIETER
Saturn's Quality-Control Program, Feb., p. 43.
GREEN J., FINN JR., J. C., and BROWN, O. D. R.
The Polar Lunar Base, July, p. 20.
GREINER, LEONARD
Underwater Propulsion, State of the Art, Nov., p. 126.
GUSTAVSON, JOHN B.
Solid-Propellant Rocket Specialist Conference, March, p. 26.
HAEUSSERMANN, W., *See* GEISSLER, E. D.
HALEY, ANDREW G.
Shepherd Elected IAF President at Bureau Meeting in Paris, April, p. 74.
International Scene, Aug., p. 74.
International Academy Elects Corresponding Members, Oct., p. 87.
Space Law and Sociology, State of the Art, Nov., p. 115.
Top Soviet Jurists Attend 5th Space Law Colloquium, Nov., p. 167.
HARFORD, JAMES J.
On Quality of Meetings: Finally, Some Facts, Jan. 1962, p. 23.
HARVEY, D. G., *See* CARPENTER, CAPT. R. T.
HEARTZ, R. A. and JONES, T. H
Mistram and Rendezvous, July, p. 47.
HEATON, COL. DONALD H.
Approaches to Rendezvous, April, p. 24.
HEIMBURG, KARL L.
Saturn Developmental Testing, Feb., p. 48.
HERSEY, IRWIN
13th IAF Congress in Varna, Nov., p. 162.
HILL, PAUL R.
Cost-Optimizing Multistage Rockets, Jan. 1963, p. 40.
HILL, PAUL R. and SCHNITZER, EMANUEL
Rotating Manned Space Stations, Sept., p. 14.
HOBERG, OTTO A.
Saturn Telemetry and Tracking, Feb., p. 50.
HOFFMAN, D. P., *See* HOLLADAY, W. L.
HOFFMAN, H. J., *See* COUCH, D. H.
HOLLADAY, W. L. and HOFFMAN, D. P.
Systems Approach to Flight Controls, May, p. 36.
HOLMES, D. BRAINERD
Why Lunar-Orbit Rendezvous? Nov., p. 24.
HOUBOLT, JOHN C.
Lunar-Orbit Rendezvous and Manned Lunar Landing, April, p. 26.
IVES, GEORGE M.
TV Broadcasting from Satellites, June, p. 86.
JOHN, R. R., *See* YARYMOVYCH, M. I.
JOHNSON, FRANCIS S.
Atmospheric Structure, Aug., p. 54.
Physics of the Atmosphere and Space, State of the Art, Nov., p. 72.
JOHNSON, PAUL G.
Nuclear-Rocket Applications, Dec., p. 22.
JONES, T. H., *See* HEARTZ, R. A.
KASH, S. W. and TOOPER, R. F.
Active Shielding for Manned Spacecraft, Sept., p. 68.
KEFFER, CLARENCE O., *See* OSBORNE, ROBERT S.
KOELLE, H. H.
Missiles and Space Vehicles—1962, Nov., p. 29.
KONECCI, EUGENE B.
Bioastronautics, State of the Art, Nov., p. 104.
KURZHALS, PETER R. and ADAMS, JAMES J.
Dynamics and Stabilization of the Rotating Space Station, Sept., p. 25.
LABAND, K. A., *See* CLARK, L. G.
LALLY, EUGENE
Mosaic Guidance for Interplanetary Travel, June, p. 60.
To Spin or Not To Spin, Sept., p. 56.
LANGE, OSWALD H.
Saturn Systems Management, Feb., p. 31.
LANGMUIR, DAVID B.
Electric Spacecraft—Progress 1962, June, p. 20.
LAWRENCE, H. R., *See* CUMMINGS, C. I.
LEGALLEY, DONALD P.
Guidance and Control, State of the Art, Nov., p. 48.
LINDSTROM, ROBERT E.
The Saturn Stages, Introduction, Feb., p. 32.
LOOK, GEORGE, *See* OSBORNE, ROBERT S.
LUDWIG, G. H. *and* SCULL, W. E.
The Orbiting Geophysical Observatory, May, p. 24.
MACDONALD, GORDON J. F.
The Moon and Its Interior, July, p. 14.
MAGNUSON, SENATOR WARREN G.
Planning for Space Communications, Jan. 1962, p. 18.
MATHISON, RICHARD P.
Constraints in Space Telecommunication Systems, May, p. 38.
MCCOY, F. J., *See* DENHOLM, A. S.
MCMILLAN, BROCKWAY
The Military Role in Space, Oct., p. 18.
MCPHAIL, C. D., *See* SMITH, G. H.
MOAK, HAROLD
Thrust-Vector-Control Schemes for Solid Rockets, March, p. 28.
MRAZEK, WILLIAM A.
Saturn S-IB and -IC Stages, Feb., p. 34.
Structures and Materials Impasse? Jan. 1963, p. 36.
MYERS, THOMAS
Solid-Propellant Rockets, State of the Art, Nov., p. 81.
NEWBAUER, JOHN
The Last Annual ARS Meeting, Jan. 1963, p. 20.
NYBERG, D. G., *See* COUCH, D. H.
OSBORNE, ROBERT S., KEFFER, CLARENCE O., and LOOK, GEORGE
Materials and Structures for Space Stations, Sept., p. 36.
PEABODY, LT. COL. P. B., *See* DORMAN, B. L.
PENNER STANFORD S.
Propellants and Combustion, State of the Art, Nov., p. 97.
POPMA, DAN C.
Life Support for Space Stations, Sept., p. 44.
POUNDER, E., *See* DOWNHOWER, W. J.
RAFEL, NORMAN *See* CANRIGHT, RICHARD B.
RECHTIN, EBERHARDT
What Is a Spacecraft Electronic System? May, p. 28.
RESLER JR., EDWIN L.
Magnetohydrodynamics, State of the Art, Nov., p. 146.
RHODE, RICHARD A.
The First Hundred Seconds, June, p. 14.
RIEDER, R. A., *See* DOWNHOWER, W. J.
RITTER, OSKAR, *See* STRUGHOLD, HUBERTUS
ROM, FRANK E. and FINGER, HAROLD B.
Nuclear Propulsion, State of the Art, Nov., p. 90.
SAGAN, CARL
Liege Colloquium Highlights Planetary Physics, Oct., p. 78.
SCHAEFER, HERMANN J.
Protection Against the Solar Flare, Aug., p. 24.
SCHELKE, JOSEPH A.
Saturn J-2 Engine, Feb., p. 41.
SCHNITZER, EMANUEL, *See* HILL, PAUL R.
SCHWINGHAMER, ROBERT J.
Magnetic Forming in Space, Sept., p. 63.
SCULL, W. E., *See* LUDWIG, G. H.
SHAFER, J. I., *See* SUMMERFIELD, M.
SHEA, JOSEPH F.
System Planning and "State of the Art," Nov., p. 46.
SINGER, STANLEY and FARBER, MILTON
Electro-Propulsion with Colloids, Jan. 1962, p. 34.
SISSENWINE, NORMAN
Announcing the U.S. Standard Atmosphere—1962, Aug., p. 52.
SLATER, JOHN V., *See* TOBIAS, CORNELIUS A.
SLATES, B. J., *See* COUCH, D. H.
SMITH, G. H. and MCPHAIL, C. D.
Simulating Manual and Automatic Rendezvous, April, p. 38.
SMITH JR., ROBERT L.
Automatic Checkout for Saturn Stages, Feb., p. 46.
SMITH, THEODORE D.
Saturn S-IV Stage, Feb., p. 36.
SNYDER, NATHAN W.
Power Systems, State of the Art, Nov., p. 110.
SOLA, F. L., *See* DOWNHOWER, W. J.
SONETT, CHARLES P.
Magnetic Fields in Space, Aug., p. 34.
STEARNS, JOHN W.
Electro-Propulsion System Applications, March, p. 22.
STEHLING, KURT
Lunar Takeoff, July, p. 34.
STRAUB, EDWARD E.
Saturn H-1 Engine, Feb., p. 39.
STRUGHOLD, HUBERTUS and RITTER, OSKAR
Planetary Gravispheres, Jan. 1962, p. 26.
STUHLINGER, ERNST
Electric Propulsion, State of the Art, Nov., p. 60.
SUMMERFIELD, M., SHAFER, J. I., THACKWELL JR., H. L., and BARTLEY, C. E.
Applicability of Solid Propellants to High-Performance Rocket Vehicles, Oct., p. 50.
SZEBEHELY, VICTOR G.
Astrodynamics, State of the Art, Nov., p. 52.
THACKWELL JR., H. L., *See* SUMMERFIELD, M.
THORNTON JR., T. H., *See* BARNES, F. L.
TINNAN, LEONARD M.
Reusable Launch Systems, Jan. 1963, p. 50.
TOBIAS, CORNELIUS A. and SLATER, JOHN V.
Our View of Space Biology Widens, Jan. 1962, p. 20.
TOOPER, R. F., *See* KASH, S. W.
TRAPP, ROBERT F.
First Nuclear-Propulsion Conference Held, Dec., p. 31.
TRENT, CHARLES H.
Nuclear-Engine Design Goals, Dec., p. 54.
TRUAX, ROBERT C.
Thousand Tons to Orbit, Jan. 1963, p. 44.
VOAS, ROBERT B.
Manual Control of the Mercury Spacecraft, March, p. 18.
VON BRAUN, WERNHER
Saturn and the Future, Feb., p. 22.
VON TIESENHAUSEN, GEORG
Engineering Problems of Orbital Operations, April, p. 36.
VREULS JR., FREDERICK E.
Saturn S-I Stage, Feb., p. 33.
WHIPPLE, FRED L.
Dust and Meteorites, Aug., p. 40.
WILLIAMS, MAX L.
Structures and Materials at Phoenix, June, p. 68.
WILLIAMSON, F. and YIM, E.
Ugly Duckling—VT 1105R Test Vehicle, July, p. 42.
WOLFERS, CHARLES V.
Integrating Mercury Electronic Subsystems, May, p. 32.
WYCKOFF, ROBERT C.
Venus Mission—1962, July, p. 54.
YARYMOVYCH, M. I., DEWIESS, F. A., and JOHN, R. R.
Feasibility of Arcjet-Propelled Spacecraft, June, p. 36.
YIM, E., *See* WILLIAMSON, F.

CHICAGO: Bob Foran, Phil Holmes, Tom Fitzpatrick
National Advertising Sales
410 North Michigan Ave., Chicago 11, Ill.
Telephone: 467-6240

DETROIT: Charles Schroeder
National Advertising Sales
424 Lafayette Building, Detroit 26, Mich.
Telephone: WO 1-0278

ADVERTISING REPRESENTATIVES

NEW YORK: Don C. Emery & Associates
400 Madison Avenue, New York, N.Y.
Telephone: PLaza 9-7460

KANSAS CITY: Fields Baldwin
National Advertising Sales
4638 J. C. Nichols Parkway, Kansas City, Mo.
Telephone: JE 1-1070

LOS ANGELES: Jim Galloway, Dave Barton
James C. Galloway & Company
6535 Wilshire Boulevard, Los Angeles, Calif.
Telephone: OLive 3-3223